CLAIMS

1. A semiconductor epitaxial wafer having an epitaxial layer stacked on a semiconductor substrate, wherein:

plural epitaxial layers are stacked only on a front side of the semiconductor substrate;

an impurity concentration of an epitaxial layer being in contact with the semiconductor substrate among the plural epitaxial layers is high enough for the formation of a gettering site; and

an impurity concentration of the semiconductor substrate is low enough for the suppression of impurity discharge from a back side of the semiconductor substrate.

2. A semiconductor epitaxial wafer having an epitaxial layer stacked on a semiconductor substrate, wherein:

plural epitaxial layers are stacked only on a front side of the semiconductor substrate;

an impurity concentration of an epitaxial layer being in contact with the semiconductor substrate among the plural epitaxial layers is 2.77×10^{17} to 5.49×10^{19} (atoms/cm³); and

an impurity concentration of the semiconductor substrate is 1.33×10^{14} to 1.46×10^{16} (atoms/cm³).

3. A semiconductor epitaxial wafer having an epitaxial layer stacked on a semiconductor substrate, wherein:

plural epitaxial layers are stacked only on a front side of the semiconductor substrate;

a resistivity of an epitaxial layer being in contact with the semiconductor substrate among the plural epitaxial layers is 0.002 to 0.1 (Ω ·cm); and a resistivity of the semiconductor substrate is 1 to 100 (Ω ·cm).

4. The semiconductor epitaxial wafer according to any one of claims 1 to 3, wherein the epitaxial layer being in contact with the semiconductor substrate contains boron.